

**U.S. Department of Energy  
Technical Qualification Program**

# ***Occupational Safety Qualification Standard***

## **Study Guide**

**For the**

***Project Management  
Qualification Standard***

**April 1996**



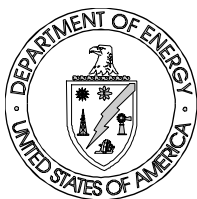


**Competency 2.8** Project management personnel shall demonstrate a familiarity level knowledge of the Occupational Safety and Health Act (OSHA) requirements contained in the following documents:

- **Department of Energy (DOE) Order 5480.9, Construction Project Safety and Health Management**
- **29 CFR 1910, Occupational Safety and Health Standards**
- **29 CFR 1926, Safety and Health Regulations for Construction**

**1. Supporting Knowledge and Skills**

- a. Discuss how the Occupational Safety and Health Act (OSHA) applies to and impacts Department projects.
- b. Identify the requirements in the Occupational Safety and Health Act (OSHA) that form the basis of authority for project management personnel in the oversight and management of a project.
- c. Discuss the project manager responsibilities set forth in DOE Order 5480.9, *Construction Project Safety and Health*.
- d. Discuss the construction contractor's responsibilities under DOE Order 5480.9, *Construction Project Safety and Health* for each of the following:
  - Establishing a safety program
  - Worksite presence during work activities
  - Compliance by subcontractors
- e. Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:
  - Responsibility for the performance of these analyses
  - Purpose and content of the analyses
  - When the analyses are required to be performed
- f. Discuss the contractor's responsibility for providing necessary training to employees in the area of safety and health on the worksite.



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- g. Discuss the project manager's responsibility for on-site safety and health inspections.
- h. Discuss the contractor's required response to an identified safety and/or health hazard.

### 2. Self-Study Activities (corresponding to the intent of the above competency)

- NOTES:
- The DOE Orders are in a state of transition. Please refer to the following gopher site for a cross reference of new and old Orders:  
gopher://VM1.HQADMIN.DOE.GOV:70/00/doemenu1/directiv/251cross.asc
  - Below are three web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	<a href="http://cted.inel.gov/cted/index.htm">http://cted.inel.gov/cted/index.htm</a>	DOE Standards, Guides, and Orders.
OSHA	<a href="http://www.osha-slc.gov/">http://www.osha-slc.gov/</a>	OSHA documents and search engine
U.S. House of Representatives	<a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>	Searchable Code of Federal Regulations

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-A** Discuss how the Occupational Safety and Health Act (OSHA) applies to and impacts Department projects.

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-B** What is the general project manager responsibility set forth in DOE Order 5480.9A, *Construction Project Safety and Health Management*? It is not necessary to detail the specific responsibilities for this exercise; state only the major responsibility.



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**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-C** Discuss the construction contractor's responsibilities under DOE Order 5480.9A, *Construction Project Safety and Health Management* for each of the following:

- Establishing a safety program
- Worksite presence during work activities
- Compliance by subcontractors

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-D** Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:

- Responsibility for the performance of these analyses
- Purpose and content of the analyses
- When the analyses are required to be performed

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-E** Discuss the contractor's responsibility for providing necessary training to employees in the area of safety and health on the worksite.

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-F** Discuss the project manager's responsibility for onsite safety and health inspections.

**Read** DOE Order 5480.9A, *Construction Project Safety and Health Management*.

**EXERCISE 2.8-G** Discuss the contractor's required response to an identified safety and/or health hazard.



### 3. Summary

The Occupational Safety and Health Act (OSHA) became effective on April 28, 1971. The Act grants the Secretary of Labor the authority to promulgate, revise, and revoke safety and health standards, to conduct inspections and investigations and to issue citations, and to require employers to keep records of safety and health data. This authority includes a shared responsibility with other federal agencies for the adequacy of programs in the organizations reporting to them. The general provisions of the act require each employer to furnish to each employee a place of employment free from recognized hazards, and to comply with occupational safety and health standards. DOE has established that 29 CFR 1960 and OSHA requirements are to be the minimum standards for federal employees.

DOE Order 5480.9A, *Construction Project Safety and Health Management*, establishes the specific requirements for the management of Occupational Safety and Health (OSH) on DOE construction projects. OSHA standards and regulations such as 29 CFR 1910, *Occupational Safety and Health Standards*, and 29 CFR 1926, *Safety and Health Regulations for Construction* are important documents for occupational safety personnel.

### 4. Exercise Solutions

**EXERCISE 2.8-A** Discuss how the Occupational Safety and Health Act (OSHA) applies to and impacts Department projects.

**ANSWER 2.8-A** SCOPE. The provisions of this Order apply to all Departmental elements, and to the extent provided in their contracts/subcontracts, to the contractors and subcontractors performing work on DOE construction projects that exceed the monetary threshold (currently \$2,000) for application of the average standards prescribed by the Davis-Bacon Act (40 U.S.C. 276a-276a-7).

APPLICABILITY. The requirements of this Order shall apply to contracts at government-owned or -leased facilities upon which the contract clause "Safety and health (Government-Owned or -Leased Facility)" (DEAR 970.5204-2) applies." DOE Order 5480.9A.

Excluded are the Director, Naval Nuclear Propulsion Program, and the Power Marketing Administration.



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**EXERCISE 2.8-B**      What is the general project manager responsibility set forth in DOE Order 5480.9A, *Construction Project Safety and Health Management*? It is not necessary to detail the specific responsibilities for this exercise; state only the major responsibility.

**ANSWER 2.8-B**      “The project manager is responsible and accountable for management of the construction project and for providing project oversight to ensure compliance by the construction contractor with the safety and health program requirements.” DOE Order 5480.9A, 9.b.

**EXERCISE 2.8-C**      Discuss the construction contractor's responsibilities under DOE Order 5480.9A, *Construction Project Safety and Health Management*, for each of the following:

- Establishing a safety program
- Worksite presence during work activities
- Compliance by subcontractors



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ANSWER 2.8-C Your response should be similar to the one shown in this matrix.

Construction Contractor Responsibilities Under DOE Order 5480.9A	
Responsibility	Requirement
Establishing a safety program	<p>“The construction contractor shall establish and maintain a program to protect the safety and health of all persons on the construction worksite to include his or her employees, employees of other contractors or subcontractors, visitors, and the public. This program also shall protect against damage to property, materials, supplies, and equipment and prevent unnecessary work interruptions. The program shall ensure compliance by the construction contractor and all worksite subcontractors with the safety and health standards prescribed in the construction project acquisition documents.”</p> <p>DOE Order 5480.9A, 10.</p>
Worksite presence during work activities	<p>“The construction superintendent or other duly designated contractor representative must be present on the worksite during the performance of any project work activities.” DOE Order 5480.9A, 10.a.(2)</p> <p>“During periods of active construction, the construction contractor shall conduct daily inspections of the worksite to identify hazards and instances of noncompliance with project safety and health requirements.” DOE Order 5480.9A, 11.a.</p>
Compliance by subcontractors	<p>“The construction contractor shall establish and maintain a program to protect the safety and health of all persons on the construction worksite to include his or her employees, employees of other contractors or subcontractors, . . . ” DOE Order 5480.9A, 10.</p> <p>“The construction contractor is responsible for ensuring compliance by all project subcontractors with project safety and health requirements. The construction contractor is further responsible for coordinating with project subcontractors . . . those OSH program elements addressing worksite hazards to which employees of other contractors may be exposed.” DOE Order 5480.9A, 10.a.(4)</p>





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- EXERCISE 2.8-D** Discuss the requirements for the performance of a Preliminary Hazard Analysis (PHA) and an Activity Hazard Analysis (AHA). Include in the discussion each of the following elements:
- Responsibility for the performance of these analyses
  - Purpose and content of the analyses
  - When the analyses are required to be performed

- ANSWER 2.8-D** “The construction contractor shall evaluate the work associated with each project phase to identify specific hazards to which worksite employees and other worksite personnel may potentially be exposed and to identify appropriate control measures. The construction contractor shall accomplish this through the performance of preliminary and activity hazard analyses as outlined below.” DOE Order 5480.9A, 10.b.
- Preliminary Hazard Analysis (PHA)
    - It is the responsibility of the construction contractor to prepare and the construction manager to approve the PHA.
    - The PHA must be approved prior to commencement of work on the project.
    - The PHA is to identify specific hazards and to identify appropriate control measures.
    - The PHA must identify the anticipated construction phases, the types of hazards associated with each phase, and the potential control measures and programs. It must identify the phases of the project for which DOE-prescribed OSH standards or the construction project acquisition documents require that protective measures be designed, inspected, or approved by a professional engineer or other competent person.
  - Activity Hazard Analysis (AHA)
    - This is also the responsibility of the construction contractor to prepare and the construction manager to approve.
    - The AHA must also be approved prior to commencement of work on the project except where the PHA fulfills the requirement for an AHA.



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- The AHA expands upon the PHA and must identify the specific hazards associated with each activity to be performed in each phase and the actual control measures and programs planned to control the hazards. It must include drawings and/or other documentation for all protective measures for which the acquisitions documents or applicable OSH standards so prescribe. It must designate and identify the qualifications of the competent person or professional engineer that will conduct the inspections where so required.

**EXERCISE 2.8-E**      Discuss the contractor's responsibility for providing necessary training to employees in the area of safety and health on the worksite.

**ANSWER 2.8-E**      “The construction contractor shall ensure that each employee entering the worksite has, through experience, training, and where required, certification, the skills and knowledge necessary to safely perform his other assigned tasks. In addition, the contractor shall ensure that each employee receives initial worksite safety and health orientation and continued safety and health training addressing the hazards associated with the work and the measures necessary to control or eliminate the hazards.” DOE Order 5480.9A, 10.c.

**EXERCISE 2.8-F**      Discuss the project manager's responsibility for onsite safety and health inspections.

**ANSWER 2.8-F**      While many safety and health requirements are delegated to the contractor, the primary responsibility for onsite safety and health rests with the project manager. “The project manager is responsible and accountable for management of the construction project and for providing project oversight to ensure compliance by the construction contractor with the safety and health program requirements.” DOE Order 5480.9A, 9.b.

“The project manager shall conduct inspections of all construction projects exceeding \$500,000 on at least a monthly basis during periods of active construction. For projects under \$500,000, the project manager shall develop and implement an inspection schedule which



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ensures that a representative sample of ongoing construction projects is inspected on at least a monthly basis. This shall be achieved both through a walk-around inspection of the worksite and through a review of the project safety and health plan and other safety and health program documentation. Findings of these inspections shall be documented in the project files.” DOE Order 5480.9A, 11.c.

**EXERCISE 2.8-G** Discuss the contractor's required response to an identified safety and/or health hazard.

**ANSWER 2.8-G** “The construction contractor shall take immediate corrective action to eliminate or control all identified hazards.” DOE Order 5480.9A, 11.d. Where immediate correction is not possible or the responsibility for abatement falls outside the scope of the project, the construction contractor has four other responsibilities. They include notifying affected employees, posting warning signs, implementing further interim control measures, and notifying the construction manager and other responsible authorities. Corrective actions are to be performed in accordance with the hazard abatement methodology prescribed in DOE Order 5483.1A.1.11. Occupational safety personnel shall demonstrate familiarity with the application of basic and applied sciences to safety considerations.